

S P E C I F I C A T I O N
for
LABOR AND MATERIALS
necessary
for
THE ERECTION AND COMPLETION
of
A STADIUM IN BALBOA PARK
for
THE BOARD OF PARK COMMISSIONERS OF SAN
DIEGO, CALIFORNIA.

QUAYLE BROS. & CRESSEY ARCHITECTS.
311 SAVOY THEATRE BLDG.
SAN DIEGO, CAL.

GENERAL CONDITIONS OF CONTRACT.

The term CONTRACTOR, herein, refers to the person or persons undertaking the work required by the following specifications. The term OWNER refers to the person or persons for whom the work is to be done. The term ARCHITECTS refers to the firm of Quayle Bros. & Cressey. The term SUPERINTENDENT refers to the representative of the ARCHITECTS on the works.

The owner shall not be bound to accept any of the bids submitted or incur any liability for the preparation of bids.

The CONTRACTOR shall execute a contract satisfactory to the OWNER and provide at his own cost, a statutory bond, as required by the Mechanics' Lien Law, for 50% of the contract price, and in addition shall furnish a common law bond to the OWNER for 25% of the contract price for completion and delivery of the buildings free from liens, notices or any encumbrance.

The drawings and specifications are to be taken conjointly and illustrative of each other, and everything shown or inferred by the drawings and specifications, or which may be usual to the class of work so described, shall be understood to be included in the accepted bids, unless particularly excepted or cancelled in writing.

CONTRACTORS are to inspect the building location and make all inquiries before bidding regarding facilities for carrying on the work, and no claim shall be made for alleged lack of information after bids are accepted.

The CONTRACTOR shall lay out the work generally and in detail and be responsible for its accuracy. Figured dimensions are to take precedence over scale measurements on the drawings. The CONTRACTOR shall personally superintend the work and keep a competent foreman on the premises.

Should any information be omitted from the drawings or specifications which is necessary to fully explain the work, or should any error develop in any drawing, document, or the work of other contractors affecting the work included in specifications, the contractor shall immediately notify and obtain directions from the ARCHITECTS, and failing such notification, shall be responsible for and make good defects or damage in the work affected.

The ARCHITECTS may and will furnish oral or other explanations and directions where necessary to assist the work, and the CONTRACTOR shall conform to same.

Work executed without previous and definite written order for an extra charge shall constitute an acceptance of verbal explanations as being in conformity with the contract.

All drawings and specifications are to be returned to the ARCHITECTS in reasonable condition on demand, following completion of the work, and it is understood and agreed that documents prepared by the Architects remain their property for which the CONTRACTOR is responsible.

One copy of the drawings and specifications to be kept on the buildings, accessible to the ARCHITECTS.

The whole of the labor, materials, transportation and everything required for completion of the work in a first-class manner, shall be provided and paid for by the CONTRACTOR, unless special exception is made in the specifications or drawings. Each CONTRACTOR shall pay for water service to their particular portion of the work. Scaffolding, plant and apparatus shall be sufficient for the safe, convenient and proper completion of the work, and provision shall be made for the proper protection of life and property during progress of the work.

The CONTRACTOR shall not sublet any part of the work without the approval of the ARCHITECTS, except in respect to the supply of manufactured material.

The CONTRACTOR shall maintain the buildings and land free from disused plant material and debris, and shall arrange for drainage during rains.

The CONTRACTOR shall facilitate inspection of work by the Owner, ARCHITECTS, or others authorized by them, and shall within twenty-four hours following written notice proceed to remove or make good defective or improper work or materials as required by the Architects.

The CONTRACTOR shall deliver up the work to the OWNER in finished and perfect order, clean and clear, including the land area affected by building operations, all to the satisfaction of the Architects.

The OWNER may, without invalidating the Contract, require deviations, additions or omissions from the work shown or described by drawings and specifications, and an agreed price (or the fair valuation, based upon the prices of the Contract) shall be added to or deducted from the amount of Contract for such additions or omissions, provided that the same are duly authorized in writing and a variation allowed if necessary in the time limit of the Contract.

Invoices, statements, time sheets or any document required by the Architect to prove origin, weights, value, date, quality or like information, shall be produced to the Architects on demand.

Should the CONTRACTOR during progress of the work become bankrupt, or decline or neglect for three days to comply with any notice or demand in writing by the OWNER or ARCHITECTS, or cause delay by insufficiency of labor or material or unreasonable suspension of the work from any cause, or fail or refuse to comply with the drawings, specifications and conditions of Contract, the OWNER may take immediate possession of the premises and proceed to properly complete the provisions of the Contract. The expense of the notice and cost of such completion shall be deducted from any amount due or to become due to the CONTRACTOR, who may also be held liable for any excess of cost of completion over the amount of money due. Any balance on the amount of Contract remaining after the above described completion shall be paid to the CONTRACTOR or the persons legally entitled to same.

The OWNER shall not be held liable or accountable to the CONTRACTOR for completion under the above-named procedure.

The CONTRACTOR shall comply with all public ordinances and regulations affecting the work, anything to the contrary herein notwithstanding, and shall give all notices, obtain permits and pay all fees required, excepting only the general building permit which is to be obtained by the OWNER.

The CONTRACTOR must comply with the State Law requiring temporary flooring during construction. The CONTRACTOR is to provide by liability insurance against loss, injury or interference to persons or property, and be responsible for everything affected by the operations of the work from any cause and prevent claims upon the OWNER in respect to same. Where different CONTRACTORS are employed, each must be responsible to the other for loss, damage, failure to finish work at the proper time or like cause of dispute. Any CONTRACTOR prevented by others from the performance of any work shall file with the ARCHITECTS a written notice of complaint, failing which, claims for alleged interference shall be held to be unfounded.

Fire insurance is to be provided by the CONTRACTOR to cover fully the CONTRACTOR'S INTERESTS in the work from time to time. The OWNER is to provide insurance for OWNER'S interests from time to time when payments have been made to the CONTRACTOR.

Any work and materials delivered and intended to form parts of the works shall be considered the property of the OWNER and shall not be removed without the OWNER'S consent, but the CONTRACTOR shall have the right to remove any surplus on completion of the work. Material used upon the work shall be new and free from defects and subject at all times to the approval of the ARCHITECTS.

The CONTRACTOR will be required to complete the work within a time limit to be agreed upon and dating from the execution and recording of the Contract and Bond. An extension of the time limit shall be granted to the CONTRACTOR, equivalent to the time lost by any default of the OWNER or ARCHITECTS, unreasonable interference by special CONTRACTORS, destruction and disturbance due to fire, earthquake or the elements, abandonment of the work by employees and like causes, outside the control of the CONTRACTOR; provided, always, that claims for such extension shall be made in writing to the ARCHITECTS within twenty-four hours of the time lost upon the work. Any time allowance shall be finally decided and certified by the ARCHITECTS after investigation of the claims and causes of delay.

Payments under the Contract shall be made only on the certificates of the ARCHITECTS, and signed application for such certificates shall be made by the CONTRACTOR, together with a statement of work done if required.

The OWNER reserves the right to withhold payment of any and all sums certified by the Architects to be due, pending investigation of the quality and character of the work, and liability to claims or liens. The Owner may employ any agent or agents for such investigation.

The Contract shall state the installments or rate of same to be made during progress of the work or following upon completion, and payments shall be made by the OWNER only upon the production and filing of satisfactory vouchers showing payments or release from liability for labor or material actually incorporated in the works at the date of the Architects' certificate.

The OWNER may carry on other work upon the building and premises during progress of the CONTRACTOR'S work, but this or any other act of the OWNER, ARCHITECTS, or others under authority from the OWNER, shall not be deemed an acceptance of the work or contract until the final certificate of acceptance is issued by the ARCHITECTS and confirmed by the OWNER.

It shall be agreed that the CONTRACTOR will make good and be liable for latent defects or work not done according to the drawings and specifications, which may be discovered within twelve months from the date of the final certificate of payment.

S P E C I F I C A T I O N

for

Work in the construction of a STADIUM on land, in Balboa Park, adjoining the San Diego High School and extending North from 15th St., for the Board of Park Commissioners, City of San Diego, Calif.

Quayle Bros. & Cressey Architects,
311 Savoy Theatre Building,
San Diego, Calif.

May 1914.

GENERAL CONSTRUCTION

FINISHED GRADING, CONCRETE, BRICKWORK, ETC.

Contractors for this section are directed to provide for all clauses of the general conditions of contract preceding this specification, including cost of 75% Bonds, Water Charges, Fees, Fire and Liability Insurance and other costs affecting the work of this section.

BUILDING OFFICE.

Contractor for this section to provide suitable main office accommodation for all sections, until completion including lock up desk and drawers. Provide a telephone for the full period of the work and pay charges. Arrange for each trade to share cost of office and telephone.

PLANS.

Provide suitable hinged boards for plans and protect from damage. This contractor to take charge of plans and be responsible to the architects for same.

SUPT'S. OFFICE.

Provide a convenient lock up office and maintain same throughout contract for the Supt. of Works. Include lock up desk and drawers, large drawing board and square and stove.

TOILETS.

Provide for all trades proper toilets and urinals and maintain same in clean and sanitary condition until completion of work. Post notices to prevent nuisance around buildings.

WATER.

The Park Commissioners will provide City water for all purposes free of charge to the contractor.

SCOPE OF WORK.

This contract must include everything necessary to complete the work shown by the drawings, excepting only ~~rough excavating work, plumbing~~ *work included in separate contract* ~~and electrical work~~ *for grading* unless definite exceptions are made later in this specification. Refer to specifications of other sections for conditions affecting this section. Finished grading is included in this section, see later clauses of specifications.

INFORMATION.

Contractors are directed to inspect the site and obtain full particulars of everything affecting the cost of carrying out the work before bidding.

LAYOUT.

Grading contractor will lay out rough earth work, except to foundations and columns. Contractor for this section to do all remaining work in laying out and be responsible for the accuracy of same.

FOUNDATIONS AND FINISHED GRADING.

FOUNDATIONS.

Digging, filling and tamping to all foundation trenches and footing holes to be included in general construction section. Depths of same, to be taken below the grades left by Grading contractor. Wet and tamp work in filled ground. Foundations to be stepped level and true and to be inspected by Supt. before covering. Unless specially excepted, foundations are to be carried to original ground.

South retaining wall to be back-filled in 6" layers sloping out from wall, wetted and tamped, with extra care at footings. Grading contractor will leave fill clear of retaining wall.

STEPPING.

Grading contractor will leave uniform slopes for stands around field, (on line of concrete nosing); General Contractor to cut stepping clean and true for concrete and to do any wetting or making good where fill occurs. Dirt from stepping to be used to form rounded bank, etc., at foot of stands and to level and bank track which is rough graded below level to allow disposal of most of surplus from steps.

SURPLUS.

Grading contractor will leave pockets within field area to take any surplus at direction of General contractor.

SOIL.

Top soil will be separated by Grading contractor and heaped for removal and spreading by general contractor. Protect same during progress of work. Grading plans A, B, C, D show limits of rough grader's contract. All remaining digging, filling and grading work required to complete the levels, terraces, roads, slopes, grades and earth work of every description to be included in this general construction section, including preparing for concrete floors and walks.

ROADS

Outside road formation and surfacing will be done by grading contractor. General contractor to trim and make good to same at completion, clear gutters and leave roads neat and in proper condition for dirt surfaced work or otherwise arrange for road work to be deferred by grading contractor where liable to damage.

Select any hard material found in excavating and use in finishing east and west approach slopes. Intersections with old roads where marked "re-formed" to be separate work by or on the order of the Board of Park Commissioners. Note limits of contract on grading plan "A" referring to road work.

FIELD.

Athletic field to be brought to drainage grades as shown and finished with 6" deep of fine dirt and soil free from stones, lumps or hard matter. Wet, tamp and roll to firm surface and protect from damage.

TRACK.

Running track to be graded in fine dirt to within 3" of finished levels and finished with 4" fine screened furnace cinders, free from clinkers, evenly spread and rolled firm. Build track banking to proper raise at curved ends and straight lengths to have cross falls as shown.

SOILING.

Spread soil separated by rough grader 6" deep on south end lawns terraces and slopes, also on spaces at south end of track and rounded banks at foot of stands. Where soil is insufficient use fine dirt free from lumps, stones, etc., and arrange with grader to separate same.

Protect soil work by stakes and cords.

Exterior banked slopes on west, east and north of stands will be finished by rough grader, but general contractor is to trim and make good to same immediately before leaving the work. Inside slope above North end of stands to be trimmed by finish grader.

TREES, ETC.

Planting and seeding will be separate work by the Park Commissioners.

FOOTINGS.

All footings and walls not specially excepted are to be sunk to solid foundation and if necessary deeper and wider than shown, the larger foundation to constitute an extra cost, but only when properly authorized in writing as an extra. Contractor to be responsible for extra concrete due to earth falls, exposure to sun and water or errors in trenching. Less depths or size of foundations to be allowed for fair valuation.

CONCRETE

The whole of the construction on drawings is intended to be reinforced concrete unless definitely described otherwise.

CEMENT.

All cement to pass standards and test specified by the American Society for Testing Materials. Tests to be made at the Park Commissioners' cost and if required are to be made by independent experts. Provide proper cement sheds and arrange for delivery of cement to suit 28 day test. Cement to be a standard approved brand. No change of brand to be made except by direct order of Architects.

STONE.

Contractors have the option to use crushed trap rock or granite, 2" guage screen run for plain concrete foundations and 1" guage screen run for walls, beams, piers, columns, slabs and similar work all free from dust, impurities or undue percentage of screenings. Deliveries to be uniform in quality, alternately clean washed gravel from approved source may be used, not larger than guage given above.

SAND.

All sand to be coarse, clean and clear of organic matter, clay or other impurities, washed if required and from approved source.

PLATFORMS.

Concrete material must be delivered on platforms and kept protected.

FORMS.

Carefully form according to standard practice for all concrete work, using approved lumber, accurately built, well propped, stayed and braced. Work untrue to line, not plumb or in any way defective to be torn out and re-formed.

Pipe sleeves, conduits, boxings and all incidentals affecting this ~~at~~ other trades to be in place before pouring is commenced and this contractor must be responsible for later cutting and making good, failing proper notice to other trades.

Provide all necessary fixing strips and blocks, oil soaked and keyed with nails. Forms must remain until concrete is thoroughly set and the date of each poured section is to be marked and the Supt's. approval obtained before forms are stripped.

Arrange cleaning pockets at foot of columns and similar forms. Thoroughly clean and clear saw dust, blocks, shavings and dirt from forms; block holes and correct parts liable to cause bad facing or angles. Haunch and fillet forms as required. Saturate forms before pouring is commenced.

CONCRETE FACES.

All concrete not specially excepted will be left from the forms and visible faces must be free from practical defects and disfigurements. Allow for care in forms, etc., to secure fair faces.

CONCRETE PROPORTIONS.

Plain footings 1 part cement, 3 parts sand, 5 parts stone.
Cobble concrete as described later.

Reinforced footings, walls, piers and slabs 1, 2 and 4 parts ditto.

Tests for voids to be made and if necessary the architects may adjust above proportions of sand to suit stone, so that in every case the amount of sand in the aggregate shall at least equal the voids in the stone or gravel plus 10%. Pour test samples of mixed concrete, date and number same, and store with Supt. as required.

MIXING.

Concrete to be machine mixed in regular batches and correct proportions and to be of uniform consistency. Use clean city water.

POURING.

Mix to flow freely to forms and steel without excessive watering and to be well puddled, tamped and worked to fair faces. Avoid long wheeling and high drops and thoroughly protect concrete from disturbance during setting. Saturate concrete by spray and cover from sun until set hard.

Work showing weakness due to careless pouring and jointing to be removed.

Prevent displacement of steel and use every care generally to guarantee good construction and freedom from disfigurements.

REINFORCEMENT.

Steel to conform to the Assoc. of American Steel Mfgs.' standard specification for reinforcement bars rolled from new billets.

Contractors must provide all reinforcing material required for the proper construction of the work.

SOUTH RETAINING WALL.

Reinforcing bars are to be used in this wall as shown on detail drawing #9, approved deformed type.

Note reinforcement to columns, cornices, roof slabs, etc., marked on drawings or specified later.

Contractors are to obtain explanation from the architects before bidding, should any doubt occur as to quantity or nature of reinforcement. Reinforcement to be correctly assembled, well wired and firmly supported in forms. Steel to be cleaned free from scale or excess rust before placing.

COLUMNS, CORNICES, ETC.

Columns above south retaining wall to be formed hollow of 8" concrete shaped as shown, each reinforced with ten $\frac{1}{2}$ " rods, spiral hooped with #5 wire 2" pitch.

Pedestals and base extra thickness as drawn, reinforced with triangle mesh, wired to $\frac{1}{2}$ " corner rods. Include stubs. Form simple base molds and caps as drawn. Cornice to be concrete full height as shown, with tile core. Reinforcement as marked on section, sheet #3. Note continuation of cornice across end buildings. Balustrade wall between columns formed of 12" concrete with $\frac{3}{4}$ " projecting base; include $\frac{1}{4}$ " check rods to top edges. Note projecting edge to base slab, see Section, sheet #9. Columns and cornices to Ticket Offices are shown on enlarged detail sheet #4. Rear cornices to match same.

Athletic building cornice and columns similar in detail but subject to variations shown by 1/8" drawings. Reinforcement each small column with six 1/4" check rods and light wire hooping.

PANELS.

Ornament above south arches (2 panels) to be modeled to architects drawings and approval and cast separately or poured in place at contractor's option. Simple detail intended.

ROOF SLABS.

Note reinforced slabs covering east and west ticket offices, also slabs above south arches and below same; latter to have four (total) reinforced beams, see drawings. Use 1, 2, 4 mix. Six small cover slabs occur

to N.W. and N.E. toilets, also, six main gate piers require 4" cover slabs. Above slabs to have R.I.W., Trus-Con or equal approved binder between rough work and finish. Finish to be 1 cement to 2 sand mixed with Trus-Con waterproofing and laid to grade in $\frac{1}{4}$ " least thickness.

COPING.

N.W. and N.E. toilet drawings show poured slab copings to walls. Use 1, 2, 4 mix and tamp top to fair face and slight fall. Cut in expansion joints. Ditto to coping to walls of North ticket office, also front and rear walls of Athletes building, see sheet #3 including galva. netting in last item.

GATE POSTS.

N.W. and N.E. entrances have reinforced concrete gate posts and foot stays. Use 1, 3, 4 mix and leave faces with fair finish. Pour in gate hangers provided by carpenter and provide wall anchors. South field gates to have concrete side posts with moulded caps, use $\frac{1}{4}$ " check rods in angles. Posts on est side to have cobble concrete foundation from original ground.

CONCRETE STANDS.

The whole of the stepping to stands to be of 1, 2, 4 plain concrete laid on dirt. Line of cut and fill is marked on sheets I and A. General Contractor to wet and pack dirt. Concrete to be laid in open jointed panels as shown by detail and center of each panel to have deep cut line. Brush and paint all risers, joints with approved solution to prevent adhesion of tread above. See note on detail for increasing thickness of steps on fill, also for reinforcing and smaller panels.

Face of risers to be left fair and clean from forms.

Top of treads to be finished by tamping to finished face and slight grade or if required, to be troweled to fair face. (Smooth work not desired) Forms to remain until concrete is hard set and stepping to be covered with moist dirt or otherwise protected to satisfaction of Supt.

AISSLES.

Aisle steps to match main stepping and ends of steps to be blocked solid.

WALKS.

Upper and lower walks of stands to be of 4" concrete 1, 2, 4 mix,

laid in panels, surfaced as laid, (without separate finish coat) and left with fair face to true grades and lined with jointer.

CURBS.

Upper walk to have concrete curb along outer edge as shown, left fair from forms and cut in panel lengths. Lower walk to have concrete curb, as detailed, with buttress blocks for pipe rail stays, all left fair from forms. Joint in panel lengths and anchor as shown. Run hot natural asphalt properly tempered in joint between curb and walk where marked. Arrange for plumber's stubs to be fixed before pouring curb. Curb 6" x 18" to be formed at north, N.E. and N.W. entrance walks along gutter line, fair troweled. Curbs to south entrance 5" wide raised to height of 1st riser (about 7") smooth troweled finish and edges rounded. Curb to Athletic Court walk 6" x 18" fair troweled finish.

NORTH ENTRANCE.

Buttress walls concrete as shown, with $\frac{1}{4}$ " rods 10" x 10" centers both faces.

FLOORS.

Floors not specially referred to are to match walks as specified above, including landings at side entrances to Athletic Court, circular walk to court, ticket office floors and 1st landings adjoining same and terrace floors.

All rooms of Athletic building and N.W. and N.E. toilets rooms to have 4" floors laid as above but troweled smooth. South entrance landing ditto.

Floors of Shower rooms, toilet rooms and urinals to be graded and rounded to fixtures or outlets as directed and to have Trus-Con or equal waterproofing in finished face.

COLORED WORK.

The whole of the stand steppings, walks and curbs north of south wall line to be colored with 1 lb. best lamp black to each sack of cement in mixture, (light gray). Remaining work natural color.

SILLS.

Form all window sills thresholds in concrete, smooth faced, if required and sloped to cast water. Sills to have $\frac{1}{4}$ " check rods in front edge.

COBBLE CONCRETE WORK.

All steps, stairs and landings, also terrace, buttress, curb and balustrade, foundation and retaining walls not otherwise shown to be cobble concrete, see detail drawings. Contractor to collect cobble rocks on site during progress of excavating, either by paying cost of labor to rough grader in separating same or by arrangement for contractors men to do the work. Clean all cobbles with hose or other approved means, lay in place, fill cavities with rough gravel or equal and pour mix of 1 cement, 3 sand and 3 parts stone or clean gravel ($\frac{3}{4}$ " screen run) to forms. Top faces tamped and worked to fair face and grade; stair risers may show cobbles and be moderately rough but wall faces are to be fair from forms. Note joints provided in walls and steps. Cobble work below ground may be poured with coarser mix (1, 3, 6) at contractors option. Entrance steps at south entrance to be smooth troweled east and west terrace steps (from road only) finished fair to match concrete walks. Flower box walls cobble concrete as above with five $\frac{1}{4}$ " check rods in height. Wide buttresses at entrances also to have $\frac{1}{4}$ " check rods or mesh in each angle and every 12" across top.

RUSTIC STEPS.

Exit stairs on east and west slopes of stands to have rustic steps formed of cobbles hard pan and gravel or of sound tree branches hard packed with dirt and gravel, arranged to follow slope of banks as far as practicable.

TOPS OF WALLS, ETC.

All projections, offsets and exposed tops of walls, etc., to be sloped to cast water.

BRICKWORK

Build the exterior wall of Athletic Building in common brickwork 13" and 9" thick as shown including foundation piers to sizes marked. Build walls of east, west and north ticket offices, also walls of N.E. and N.W. toilet and entrance buildings in common brickwork as shown, including foundation walls and arches. Inside faces only of walls in latter buildings

to be flat pointed. Terminal buildings east and west ends of colonnade to have brick walls full height as shown, rough for cement all faces. Rough cut for angles and jambs, etc., and form arches in brick, also rough form and project for molds. Four partition walls and two arched soffits to be built in approved 8" tile, laced with $\frac{1}{2}$ " galvd. netting every 3rd course and bonded to walls. Provide four stay bars $1\frac{1}{2}$ " x $\frac{1}{2}$ " with anchors at springing of tile arches. Build two small side walls in Athletic court of 6" tile as drawn and bond with netting. Six main entrances piers to be built in common brickwork. All common bricks to be hard and evenly burnt and generally free from lime lumps or other defects. Build all brick and tile work in cement guaged lime mortar as approved and bond with $\frac{1}{2}$ " galvd. netting once every 5 feet in height. Brick bond 7 stretchers courses to 1 course headers. Saturate bricks and flush solid in mortar. Joints to be rough raked where plastered.

CATCH PITS.

Build one circular brick manhole on concrete base as shown on detail sheet #8. Form sand trap on top in 1, 2, 4 concrete, complete with extended slab and heavy iron grates as drawn. Provide step irons. Finish inside face in rough cement troweled as wall is built. Insert $\frac{1}{4}$ " check rods in concrete box and slab. Form one catch pit in court, size 24" x 24" x 30", in concrete, with dished slab top and heavy grate cover. Form four concrete gutter boxes at east and west terrace buttresses and one along edge of side walk at head of 15th St. See drawings. Two of these outlets to have heavy bar grates as drawn and three to have cement slab covers. Make bell mouth connection to pipe ends. Form curb extension to turn water to boxes. Extend 4" seepage tile 25 feet east and 25 feet west of manhole.

DRAINS.

Trench for and lay 18" cement sewer pipe, cement jointed, from field manhole to 15th St. curb box with connections, filling and tamping complete. Branch from same to court with 6" cement pipe. Lay 14" cement pipe under east and west terrace steps. Lay 4" seepage tile drain from each landing at east and west doorways to court, (see 1/8" plan). South retaining wall to have #18, 4" cement drain pipes for seepage at base.

WATERPROOFING.

Walls at 2 ticket offices, also east and west storage rooms south wall marked waterproofed to have R.I.W., Trux-con or equal coating. All brick or tile walls intended for outside plaster to have R.I.W., Trux-con or equal special undercoating for plaster. Insides of tree tubs ditto below ground.

FRAMES, ETC..

All window frames to be flushed and pointed before outside molds are fixed and brick molds to be full pointed. Sills to be sloped in cement before bedding frames.

GENERAL.

Out for, build in, make good for and generally give reasonable assistance to other trades.

GRADES & LEVELS

Grades and levels have been stated on plans as accurate as possible from contour lines. Contractors are to check levels, etc., in detail as work proceeds and be responsible for notice to the architects of any variations.

PLASTERING.

Plasterer's work to be 1st class throughout. Riverside Portland Cement or equal approved brand to be used for exterior plastering and Victor or equal for all interior plastering unless excepted later. Mix plaster to Mfg's. specifications. Sand to be clean, sharp, from approved source and free from salt. Clean water only to be used on the work. Generally all lathed work to receive two coats and walls two coats for interior plastering. Contractor to rough out any slack places in addition to regular coats and must back and key any smooth work requiring same. Keep angles straight and plumb and surfaces true by screeds or otherwise. Rough out flush between grounds. Work developing cracks, blisters or other defects to be replastered from angle to angle of surface affected. Gray sanded finish intended for inside work unless excepted. Use sufficient clean Manila fibre for undercoat work. Wood lath to be used throughout; clean, selected, straight grain, sawn to even thickness, free from sap or other defects, butt joints, to break in bays and correctly spaced. Use galvd. nails of sufficient length and well soak all lath work.

INTERIOR

The only interior plastering occurs in Athletes building. All walls except south front, are of stud framing and require lath and plaster as above. Ceilings to be lathed and plastered as above in all rooms including closets. Brick walls plastered 2 coats as above except closets next to retaining wall. The following rooms to have smooth finished Best Bros. Keenes cement wainscot 7 feet high: 4 shower rooms; 3 toilet rooms; 4 lobbies and towel rooms; office. (Note - Shower fixtures are slate). Finish all walls neat against cement floors.

EXTERIOR.

The whole of the visible concrete, brick, tile faces (including soffits and top surfaces) south of south end of track are to be finished by plasterer as follows: steps and walks excepted) also all exterior surfaces of ticket offices, toilet buildings and buttress walls at North, N.E. and N.W. end of Stadium Concrete, (including colonnade, cornice work, molds, etc.) to be finished with a thick dash coat of coarse sand and grit, thick cement and a small proportion of lime, color and waterproofing as approved, slop mix and finished to avoid lap marks. Brick and tile to have slack places roughed out in cement and be plastered in cement and sand 1 to 3 mix, at least 5/8" thick followed by dashing coat to match concrete finish above. Moldings, shaped jambs, etc., to openings, belts and all shaped work not finished by concretor to be formed and finished in cement by plasterer. Arrange with mason for any building out and be responsible for same. Slope projections to cast water and round edges generally as shown. Roof slabs to have coating to match other finish; vestibule soffits to match above work. Athletic court wall also shed roof soffit and 3 hallways to be wood lathed as before and cement plastered to match balance of exterior work. Backs of firewalls ditto. The general intention is to finish all exterior work (except Stadium seats, steps and stairs) to a uniform appearance. Cement round openings and frames in a thoroughly waathertight manner. Concretor provides 2 ornamental panels over arches.

TOILET STALLS.

Include for all toilet fronts and divisions of thin cement slabs, using self-centering metal fixed to channel or gal. pipe frame, kept clear of floor 9" and finished 5'-6" above floor with rounded top. (Urinal and shower stalls are slate). Stay stalls to walls or ceiling if required.

CARPENTER & MILL WORK.

Dimension lumber for buildings to be merchantable O.P. well seasoned, straight grained, free from shakes, large or loose knots or other imperfections and sawn true. Finish lumber for interior work throughout, unless excepted later to be #1 quality, selected to suit location and use. All finish to be thoroughly seasoned and kiln dried and free from sap, pitch or any defect affecting its use and appearance. Frame and construct floors, roofs, ceilings and other carpentry in thorough manner well nailed and properly secured in all cases. Keep lumber clear of wall as far as possible.

LUMBER SIZES.

Refer to drawings for sizes and spacing. Where not specially marked, rough timbers are not to exceed 16" centers. Lumber to receive laths to be sized true and laid uniform..

BRIDGING.

Cross bridge all joints, studs, etc., with 2" x 3", securely nailed, panels not to exceed 8 feet. Firestop and solid bridge to suit city inspector. Lay bridging board on ceiling joists, well nailed.

ANCHORS

Provide T joist anchors at all walls spaced not more than every 6th joist at ends and 5 feet apart at side walls.

CREOSOTE, ETC.

Mop the whole surface and ends at walls and see that air space is arranged at ends and sides.

FURRING.

Do all rough blocking furring and building out. Fix grounds with occasional expansion bolts in addition to wall plugs where required.

ROOFS, ETC.

Form roofing of Athletic building of 2" x 8"- 24" centers for rafter and 2" x 4" - 12" centers for ceilings, braced with 2" x 4" and 1" x 6" see detail. Ridge board 2" x 10", Plate 2" x 4", Ribbon 1" x 4", all trussed and well nailed. Form built out fire walls of 2" x 3". Form 3 traps into roof spaces, located in closets and finish same with board door and plain trim.

Shed roof at court formed of 2" x 12" framed to studs and to built up curb of five 1" x 10" boards on curve. Arrange fall to roof as shown and fix only suspending rods (provided by steelworker) to blocks in substantial manner. Form saddles, gutters, water breaks and boxed outlets, also form raised curbs to vents and roof openings. Trim edges of roofs with 1" surfaced face boards to drawings, secret nailed as far as practicable. Use galvd. nails. Sheath all roofs with 1" surfaced pine free from large knots and holes, unreasonable sap or other defects, well laid and boards twice nailed at each joist.

Small ticket offices, north, N.W. and N.E. of Stadium to have wood roofs generally as above to suit drawings. Edges of overhang to 2 tickets offices have surfaced molded trim, including soffit boards, see drawing #5. Terrace ticket offices to have ceiling over columns of 2" x 4" joists with 7/8" matched pine floor over same finished with nosing and apron as detailed on sheet #4.

STUDS.

All walls of Athletic building except south front are stud framing 2" x 6" or 2" x 4" as shown, well braced and framed 12" apart, with double sills and heads. Sills to be mopped with creosote and laid on strip of thick compo roofing. Continue studs to roof where required. Partitions are full height in every room; arrange studs to suit plumbing and form any openings and chases for inspection of pipes. Frame and brace over all openings. Closets at retaining wall, boarded as shown sheet #2. Anchor brick walls to stud framing with T straps twice in height extra to joists anchors.

GROUNDS.

Provide and fix grounds, blocks and nailing strips as required and do all preparing for finish and trim.

CEILINGS.

Three ticket offices north end to have matched pine ceiling boards. Ditto to part roof over two ladies toilets. Athletic rooms to have 13 ceiling ventilators openings (two rafter spaces wide x 4 feet) trimmed with plain casings. Face protected by 1/4" square galvd. mesh installed two to each locker room and balance singly in rooms directed.

SHELVES.

Provide shelves marked on drawings, (with coat rails where marked), all well bracketed and fixed. In addition include 200 feet 1" x 12" shelving and 1" x 4" under rail distributed as directed.

WAINSCOT RAIL.

Run chamfered 1" x 4" pine wainscot rail around all Athletic rooms.

BASE.

Run chamfered 1" x 8" pine base and toe around office, committee Room and 4 four small lobbies.

ATHLETIC LOCKERS.

Four lengths of lockers are shown on sheet #2. Frame these in studs and rough boards, arranging 18 sections (13, 7/8" partitions). Form one opening to each section in studs of main wall, for pair of doors 36"x68"x1 1/2" single panel, hung to 1" casings with galvd. pin hinges and finish with 1"x4" plain trim. Backs boarded. Top of lockers finished with 7/8" flooring and 3/4" x 4" flush nosing piece grooved for plaster, also 1" x 4" back board. Include 2 loose shelves 1" x 12" and 4 sets bearers to each section.

WINDOWS.

Athletes building to have 1 1/2" single sash for finished openings 2'-6" x 4'-0", with deep rebated 2" x 4" frame with 1 1/2" x 2" wall piece around same. Sill 2" x 6" sugar pine sloped and rebated. Finish outside with 1 1/2" x 2" brick mold bedded to plaster after 1st coat is laid. Sash in 6 lights, 1" bars. Trim inside with 1" x 3" plain casing and ground. Sash bottom hinged, with pair of galvd. butts. All bottom hung sash to have 3/4" taper board side cheeks with check strip. Perforate same with numerous 1/4" vent holes and provide 1/4" rod stay across window. Rear windows to match above adapted to stud wall. 1 1/2" transom sash to be provided, above doors marked on sheet #2, each 24" high, except in rear wall where head is to line with windows adjoining. Transoms with lights to match windows. 10 ticket windows to have boxed frames with extended height to take single sash, hung with weights, cord and approved rustless pin pullies. Arrange for curved heads as shown. Trim open- with plain 1" x 3" casing and stops and finish outside with brick mold as before. East & west ticket offices to have double hung sash windows (two total) 2'-0"x4'-4" finished opening, 8 lights, 1" bars. Trim in 1" x 3" plain casing and stops and finish outside with 1 1/2" x 2" mold as before.

DOOR FRAMES.

Frames and casings $1\frac{1}{2}$ " solid rebated, wide jambs double rebated. Swing doors to have hollowed frames; transoms 2" deep.

DOORS.

Door sizes are chiefly shown on plans, use nearest typical size where omitted. Doors not marked for glass to be flat and flush both sides $1\frac{1}{2}$ " thick, O.P. Doors with glass panels to have 1" squared division bars and lower part flat and flush as before. Doors in glass partition, sugar pine, $1\frac{1}{2}$ " thick, sheet #3. Glass in doors to have stops fitted. Toilet doors average 2'-3" x 4'-6" x $1\frac{1}{2}$ ", panels filled with louvre slats. Ends of stiles without projection and corners slightly rounded. Five doors to ticket offices (typical sheet #5) to have circular heads and glass panels; thickness $1\frac{1}{2}$ " sugar pine. 4 doors to public toilets and urinals to be $1\frac{1}{2}$ " framed, rebated and filled with cross lattice (see sheet #5). 8 pairs of entrance gates to be $1\frac{1}{2}$ " thick single panel, sugar pine, as shown on sheet #5. Doors at storage rooms near field entrances, in pairs $1\frac{1}{2}$ " sugar pine, glass panels, 1" bars, 8 lights per door, single panel below. Vent shaft, (boys' toilet) to have $1\frac{1}{2}$ " flush door 2'-0" x 4'-0".

TRIM.

All frames and openings not otherwise described to have 1" x 3" plain trim, with any necessary stops to make out jambs, etc. Use quarter round stops for any small margins to exterior frames not suited to trim. Run $1\frac{1}{2}$ " x 4" chamfered, under court shed soffit, (to curve)

SOUTH ENTRANCE.

Framed partition to be sugar pine, posts approximately 5" x 6" square cased; transom 8" deep cased to match, with squared nosing and under-mold, $1\frac{1}{2}$ " side lights to match doors and have stops to frames; $1\frac{1}{2}$ " transom sash ditto (fixed). Finish at walls and head with $1\frac{1}{2}$ " x 2" cove mold, both faces.

STORAGE ROOMS.

Arrange for half frames and cased transom, mullion and hinged over light sashes similar to last item to two openings near field entrance.

PARTITIONS.

Arrange for two 7/8" surfaced board partitions and rebated frames to each terrace ticket office, (full height). Arrange 7/8" plain redwood partition with 1/2" x 2" strips in Committee closet with shelf and rail one side and 4 shelves on lobby side.

PARTITIONS WITH SEATS.

Three shower rooms to have 7/8" O.P. boards and 1/2" x 2" strips in rebated frame to 6'-6" above floor. Finish top with 2" x 4" cap. Seats 1 1/2" plank surfaced and rounded, on plain framed bracket supports. Partition to start from seat level.

HEATER CLOSET.

Line closet with 3/4" redwood surfaced boards and leave ceiling open to roof.

COUNTERS.

Arrange for three towel room counters as shown sheet #2, each 24" wide, 36" high, 7/8" birch top built up, with section to open on brass back flap hinges. Top to be on plain O.P. bearers and open legs. Womens towel room to have two continuation shelves 20" wide, birch, at counter level with two 1" x 6" spruce shelves below each. Rear cupboard 6'-0" high similar to mens room but front in two single and 1 pair of doors as per plan. Mens' towel room to have 2 cupboards as shown, 14" deep, 6'-0" high, each with a pair of 1 1/2" panel doors, and four adjustable 1" spruce shelves and raised bottom shelf with 1" x 3" base. Top to have 1" x 3" cap and T & G board finish. Long cupboard in mens towel room 18" deep, 6'-0" high as last, but front arranged with six rows of fall fronts in 4 divisions. Ticket offices on terraces (sheet #2) to have 16" x 1 1/2" built up birch counter shelves as shown, on O.P. bracket under frame substantially fixed. Each window to have birch extension board over sill, close jointed to above. Three offices at north end to have similar counter shelves 12" wide sheets #5 and #7. Include for 8 drawers to ticket windows, under counter shelf, average 24" long x 6" deep, hung on hardwood rebated runners.

CASING.

Case in plumber pipes with plain O.P. face boards if required.

FIELD CURBS.

Include for wood curb each side of track, etc., as shown on drawings size 3" x 6", sawn clean, twice mopped with creosote oil, well fixed with heavy galvd. iron nails to 2" x 3" redwood stakes, creosoted and set staggered. Trim tops of stakes if required and set curb to avoid tripping, near area of ball ground. Pack firm in ground and leave top dirt trimmed neat and free from holes. No objection to curb lumber being used for forms if properly cleaned and free from damage.

FENCING.

Provide and erect complete the post and wire fencing around Stadium see plan #1 and #8. Posts 4" x 6" redwood surfaced 4 sides, set 2'-6" and hard packed in ground. Approximate centers 9'-6"; tops of posts with slight slope one way, height above ground generally 4'-6". Run six lines 4 point standard galvd. barbed wire, staggered alternate faces of posts and secured with 1 1/2" galvd. fence staples. Each panel to have center brack of 1/2" galvd. channel, punched for clinched staples or equal. Stay posts at ends, etc., to take pull of wire where necessary. Connect wires to iron gate posts at north end.

EXIT GATES.

Provide and install ten pairs of redwood framed rail gates and side fences to match, with posts and incidentals complete except hardware, according to detail drawing.

CREOSOTE & PAINT.

Mop two coats creosote on all parts of fence posts and gate posts entering ground plus 6" above dirt line. Visible woodwork of fences and gates to receive one gray priming coat of lead and oil paint.

GLASS

"Chipped" glass to be used throughout the buildings except in the following locations; south entrance door panels only, in polished plate and transom in 21 oz. selected sheet. Windows only to office and mens towel room. Court doors (2 side entrances only), 21 oz. selected sheet. All glass bedded, sprigged and painted in best oil putty after priming rebates in oil paint. Door panels and all interior glass to have wood stops.

HARDWARE.

Contractor to include for the whole of the rough hardware and fix same. Include the sum of \$195.00 for finish hardware, hinges, door and window trim, hooks and sundries. Contractors to assist selection and do all listing. Any unexpended amount of this sum may be deducted from the final contract payment, without allowance to the contractor. Include for all fixing and fitting, adjusting and leaving hardware complete, including spring hinges to doors. Contractor to receive and be responsible for hardware deliveries and returns.

GENERALLY.

Contractors must include all carpentry and millwork required to complete the buildings unless specially excepted by the specifications. Make good defects, improper or damaged work, assist other trades and leave all work in adjustment and well finished. Notify painter and see that wood work is first coated, etc., before fixing, where paint is intended. Any coarse finish, pitch pockets or other defects showing after painting to be made good by carpenter.

COMPOSITION ROOFING.

Include for clauses of General Conditions.

Athletes building to be covered full length of upper and lower roofs with the following:

One layer 10 lb. gray felt unsaturated felt; three layers 15 lb. saturated felt; the 15 lb. felt to be overlapped and fully mopped between layers with hot high grade natural asphaltum, finished with flowing coat of hot asphaltum 80 lbs. at least per square of roofing, surfaced with extra heavy coating of clean gravel and sand rolled and tamped. No asphalt to be visible after gravel finish is complete. Reinforce all angles and turns with heavy burlap mopped solid.. Turn full thickness of roofing up walls and curbs until well lapped by cement plaster. Form nosings with extra care.. Lay over sheathing of court wall and continue over tops and backs of firewalls 3 ply Neponset or equal approved roofing, lapped and cemented watertight..Carefully trim to pipes, gutters, outlets and other roof breaks. Flash under copings and at firewalls. Five small office and toilets roofs at north end to have gravel to match Othletes building. Make good any damage, leaks or defects if from any cause. Give satisfactory guarantee for maintaining roofs perfect for 5 years from completion. Roofs not mentioned above are concrete.

SHEET METAL WORK.

Include for clauses of General Conditions.

Contractors to do all sheet metal work required to complete the work shown by drawings, there being no exceptions beyond equipment lockers.

GALVD. IRON FLASHINGS

Flash roofing of Athletics building at connections with south end of stadium. Flash around edge mold of eaves to two small ticket offices. Use 26 gauge flashings generally.

LOUVRES.

Provide and fix I6 wall panels in stud wall of court, (above shed roof) to ventilate main roof, each panel approx. 16" x 24", with fixed louvres, edge folded and frame to receive and key plaster. Three similar vents to above to be installed in toilets and I2 to rooms.

CONDUCTORS & OUTLETS.

Plumber will install conductors.

Sheet metal worker to provide and connect 3 strong I6 oz. copper boxed outlets to main roof with copper pipe sleeve and heavy copper wire guard in same, also provide galvd. rod basket guard to stand above each box. Ditto to three outlets to north ticket offices. Form 6, 2½" copper sleeve overflows through walls as directed, each properly flashed.

Court shed roof to have 4" x 4½" crimped G.I. gutter to curve as shown, with straps every 2 feet under and over gutter, well fixed to roof. Connect to conductors.

AIR INLETS.

Provide and install I2 enameled adjusting registers to suit wall louvres above specified. Size adapted to stock registers.

HEATER CLOSET.

Install I4" register face in door of Heater Closet. Install 26 gauge G.I. lining to sides of closet, 60" high.

GENERAL IRON WORK.

Include for clauses of general conditions.

Provide and install ironwork of every kind required for the work shown on drawings.

GATES.

Field gates (2 pairs) at south end of Stadium to be framed in wrot iron, each gate 6'-9" x 4'-6" high, with side railing to match, 5'-0" high, securely hung to 8" diameter columns, 6'-3" out of ground, either cast iron $\frac{3}{4}$ " metal or heavy steel pipe shaft, ball cap, rim and neck, spread base, bedded solid in concrete. Gate framing 2" x $\frac{3}{4}$ "; main rails 1 $\frac{1}{2}$ " x $\frac{3}{4}$ ", short fillers $\frac{3}{4}$ " diameter. Include wrot foot bolts with concrete foot block, wrot catch and heavy galvd. padlock (sheet #3), also hooks and ring to hold gates open, fixed to concrete block.

Terrace gates (2 pairs) 15 ft. opening x 8 ft. high, all as last item except gates are to be hung to neat double wall plates and 1" bolts full width of 6 ft. gate piers. Provide pivot bearing plate at hanging jambs and wheel at center to prevent sag.

Upper walk gates (2 pairs) 10 feet opening x 4'-6" high similar to last except length of wall bolts.

North entrance gates (2 pairs) as shown sheet #7 with 6" pipe posts keyed to concrete blocks and capped on top. Framed rails 2" x $\frac{1}{2}$ " with $\frac{3}{4}$ " square fillers and braces. Include wrot foot bolts and concrete blocks, wrot catches and heavy galvd. padlocks, also hooks and rings to hold gates open. Include wrot iron fence, (3 panels each side) also 6" wrot posts, with 3" channel as shown, all to match gates and securely installed.

RAILING.

Two lengths of wrot railing up slope at south end of stands, in panels as shown, fixed to concrete, vertical height 3'-0". Include 5 bent side stays $\frac{3}{4}$ " square, fixed to wall and rail. Slope rails 1 $\frac{1}{2}$ " x $\frac{1}{2}$ ", standards 7/8" square, fillers 5/8" round (sheet #3).

NOTE

Pipe and cable railing to field installed complete with 3 gates by plumbing contractor.

BARRIERS.

North ticket office to have two 2½" galvd. flanged pipe barriers installed by Ironwork contractor (sheet #7) also the following ticket offices on terraces to have 2" single short rail, flanged and fitted behind 2 pairs of columns as shown sheet #2. Main barriers on east and west terraces to be formed of 2½" wrot pipe (galvd.) with neat smooth elbows and base flanges. Uprights to have 16" extended ends in concrete blocks below walk. Provide sleeves for concretor or equal arrangement to secure uprights; height above walk 36". Provide neat galvd. rings for future chains to openings.

TICKET GRILLES.

Provide and install plain wrot grilles to the 10 ticket openings shown, using ½" x ½" bars, curved heads and substantial fixing studs to jambs. Hand opening to later detail.

EXIT GATES.

Provide and assist carpenter to install strong blacksmiths hanger straps and hooks bolted to 18 pairs of wood gates and posts, along east and west roads, (8 pairs of same to have hooks for concrete). Gates also to have wrot foot bolts and concrete blocks to same with pipe sockets, also wrot hasp straps and heavy galvd. padlock to each pair. Include wrot hooks and rings to hold gates open.

CATCH PITS.

Concretor provides iron gates.

ROOF RODS.

Provide and deliver only ½" rods with end connections to wood as shown on detail sheet #3, spaced 8 ft. centers.

ANCHORS.

Carpenter provide joist anchors.

GAS METER DOOR

Provide and install plain iron meter door and frame with catch complete at east entrance to court.

REINFORCING.

Concretor provides steel.

PAINT.

All ironwork to have one shop coat and one field coat of best lead and oil, gray paint after scaling and cleaning.

PAINTER'S WORK.

Include for clauses of general conditions.

Do all preparing, knotting, stopping and rubbing.

WOOD.

The whole of the interior and exterior woodwork to be white primed in lead and linessed oil paint and afterwards painted 3 coats genuine old white lead and linessed oil and slight color. Sherwin-Williams or approved equal prepared paint to be used. Last coat to contain an approved amount of Sherwin-Williams exterior enamel for all work. Prime wood frames, etc. before fixing and sash before glazing is done.

FENCES.

Exterior wood fence posts and gates to same are excepted from above. This work to receive 2 heavy coats gray oil and lead paint as above extra to carpenters priming.

IRON.

Paint 2 coats, extra to other contractors coats on all visible parts of iron and steel work including field gates and posts, iron railing, grilles, barriers, pipe rail work, wire cables around field and all work requiring painting. Paint and finish exposed pipes in rooms to match adjoining work. Paint all sheet metal work 4 coats light gray oil and lead prepared paint as above.

WAINSCOT.

Prepare and paint wainscots (approx. 7 ft) 2 coats prepared lead and oil as above and finish with 2 coats "Vitrinite" or equal approved exterior enamel, in 4 shower rooms, 3 toilet rooms, 4 lobbies and towel rooms and office.

TICKET OFFICES, ETC.

Finish interior walls and ceilings of all ticket offices and public toilets at north end of Stadium, also storage rooms at south end with exterior fast water paint equal to "Konkerite" 2 coats.

BASE.

Paint 3 coats solid black paint base strip 8" high to all Athletic Rooms without wainscot. Last coat to contain exterior enamel or varnish.

GENERAL.

Any rough or imperfect work to be reported to Supt. and painter must not proceed on surfaces unfit for finish. Examine and make good damaged or defective work and leave every part clean, free from spots and generally complete and perfect. Work not bearing out properly must have extra coat at painters cost.

SWEEPING.

Painter to be responsible for final sweeping and dusting before enamel and varnish work is done and for sweeping and cleaning immediately before completion date.

PLUMBER'S WORK.

The contract will include the whole of the plumber's work, fixtures and every incidental necessary and usual to the class of work shown by drawings and this specification. Allow for clauses of general conditions preceding this specification, including cost of (75%) bonds and other charges.

The Park Commissioners will pay for the permanent water meter and connection and contractor will pay for all other permits, inspections, connections and similar requirements.

The plumbing installation shall comply with the regulations and ordinances of the City of San Diego and be in accordance with standard practice for 1st class work.

Do all digging, tamping and making good to trenches.

Names, numbers and makers of fixtures are stated as the standard of requirements; approved equal goods will be accepted.

WATER SERVICE.

Main connection to be made at point marked "A" 17 feet more or less east of steps leading to west terrace. Plumber to install 2" galvd. iron pipe service line continue north seventy feet more or less; at this point install iron box marked "B" with stop cock to shut off water from Athletes Building; then continue said 2" main from box "B" north-west 95 feet more or less to main cabinet marked "C" in face of curb wall, see sheet # I & 8. At this point provide cast iron frame and door with suitable lock, etc, complete. Main stop cock to be installed in this cabinet. 2" main will branch from cabinet marked "C" to and run continuous around entire field railing as shown and indicated on general plan and as detailed on sheet #6. This contractor shall install 16 two inch hose connections with valves in said 2" galvd. main at points as directed; valves will be heavy brass approved gate pattern with loose wheel control. This contractor to carry main through standards and under gate at north end of field. This contractor shall start at box "B" and run 1½" main to supply all fixtures in Athletes Bldg. Provide two hose connections capped in court wall of athlete Bldg. where noted on plan.

1" supply will be taken from 2" main to supply all fixtures in mens and womens toilets at east and west entrances as shown on sheet #5. This contractor shall run said 1" supplies through 4" tile pipe, said 4" tile to be laid under concrete stands only so that supplies may be renewed at any time with out disturbing concrete stepping.

This contractor shall install railing around entire field and three gates properly hung as shown and indicated on general plan and as detailed on sheet #6. Standards will be of 2" x 3" galvd. iron pipe screwed to 3" cross T and return top bend as shown to buttress. This contractor shall furnish and place in position pipe sleeves in concrete to receive the 2" & 3" standards and stays. Standards to be placed in said sleeves and firmly leaded and calked. The 2" standards are to be drilled to receive the $\frac{1}{2}$ " cable as shown.

This contractor shall furnish and place in position double $\frac{1}{2}$ " cable around entire field railing said cable will be secured at each standard by split sleeves threaded on each end with grip nut each side to firmly secure cable to each standard. Said cables will be equal to the Roebling Co.'s galvd. ship rigging and guy ropes composed of 6 strands and a hemp center and seven wires to the strand.

NOTE - The 2" main forms the bottom rail to the field railing and must pass freely through the 3" cross T. Said field railing to be lined straight, plumb and true and firmly and securely placed in position.

VALVES & COCKS.

Install fullway stop valve (gate type) in box MK. "B" to shut off water from Athletes' Bldg. Main fullway gate valve in box MK. "C" to control water in 2" main. Install stop valves to shut off water from womens' and mens' toilets at point in 2" main where 1" supply is taken off, also separate stop to each set of fixtures in each toilet room at N.E. and N.W. entrances.

In athletes' bldg. each group of locker room fixtures to have separate $1\frac{1}{2}$ " branch with stop cock, also separate stop to each and every fixture to suit location. All main stop valves to have heavy brass body, gate type, guaranteed, by approved maker. All interior valves heavy N.P.

Exterior valves may be rough finished.

See separate item for hose cocks.

GAS.

Run 1½" gas main from meter at west side entrance over ceiling joists through center of Athletes' bldg., with 1" branch outlets through base of each room (six in all) at points directed.

Run proper supply with valves to Ruud Heater as indicated. This contractor shall run a six inch No. 24 galvd. iron vent from Ruud Heater up through roof properly capped, with double sleeve through ceiling and roof, all to be properly flashed and made watertight.

RUUD HEATER.

One 100 gallon extra heavy Ruud (or equal) Charcoal Iron Tank, to be supported securely in horizontal position on Ruud Tank Supports and fitted in automatic connection with one No. 100 Ruud Multi-Copper-Coil Storage Heater and Ruud Thermostatic Moment-Valve, using a 1½" (brass or galvd.) pipe as circulators between heater and tank, with 1½" gate valves and elbows; the system to be fitted up in exact accordance with Ruud Manufacturing Co.'s printed directions and instructions, running ½" gas line to heater, with unions and ¾" gas cock in same. A 6" independent flue pipe with Ruud Draft Hood to be run from heater through roof having good draft. Cover tank with 2" wall of 85% Ruud magnesia insulation, canvased. NOTE - An equal system to above may be figured.

SOIL DRAINS.

Run waste pipes and vents according to City Ordinance, from all fixtures. Soil pipe from Athletes bldg. to road line will be standard cast iron soil pipe, all joints properly calked and leaded. Connecting branch to 15th Street sewer to be in 1st quality salt glazed pipe, cement joints. Sewer line from N.W. entrance toilet rooms to school sewer will be standard cast iron, all joints calked and leaded. Sewer from N.E. entrance toilet rooms down side road to 16th St. south boundary of Park will be 4" salt glazed sewer pipe, cement all joints and make watertight. Connect all fixtures to drains and vent add trap as per City Ordinance. Provide all necessary cleanouts in this work. Group all vents to avoid disfigurement.

DOWN SPOUTS.

This contractor shall install 3" conductors from roof of north ticket office to ground as shown, said conductor will be galvd. iron pipe screw thread. Install 3" galvd. iron screw pipe conductor from court shed roof of Athletes' bldg. and run to catch basin in court as shown.

Install three cast iron conductors from roof of Athletes' bldg. with cross runs under roof from north side of bldg. joints calked and leaded, one will run to catch basin in court and two will run down partitions and out through front wall, this contractor shall provide cement fan shaped spill ways for water so as to prevent wash.

URINALS.

Install complete, battery of three urinals in mens' toilet room (athletes' bldg.) using selected #513 L.M. buff ware, Trenton Co's. make. Arrange same with automatic flush tank wood cased, connect with N.P. piping, brass spreaders, etc., complete, set in open order. Set urinals to drain floor and pay for cementing around fixtures and finishing neat.

Install in mens' toilet rooms N.E. and N.W. entrances, battery of six and a battery of three in each toilet room, all slate as shown, same will be complete and equal those described in N-278 Clow Cat. Battery of six will have six gallon tank and battery of three will have 2 gallon tank, balance as specified under plate number N-278. Urinals set to drain floors in a proper manner.

LAVATORIES.

Install complete, lavatories in womens' toilet rooms N.E. and N.W. entrances and two batteries of two in womens' toilet room athletic bldg. and one battery of three in mens' toilet room Athletic bldg., same will be Douglas 20" x 18" Plate 4067 P, with self closing faucets, N.P. waste and fittings complete. Separate stops to each, waste and vent to meet City Ordinance.

WATER CLOSETS.

Install toilets shown on plan in womens' and mens' toilets N.E. and N.W. entrances and womens and mens toilet rooms in Athletes' bldg., same will be equal to Plate 178 D, Douglas Cat., using Niagara or equal approved hand action flush valves, polished oak seats with open fronts thoroughly reinforced. Bowls to have raised sanitary lip in womens' toilet rooms, waste

and vent in a proper manner, separate stops to each fixture. All exposed work in Athletes' bldg. to be N.P. Water connections separate from other fixtures and properly arranged with air chambers.

DRINKING FOUNTAIN.

Install complete drinking fountains at N.E. and N.W. entrances (four in all) as shown, same to be complete as shown on Plate 5916 F, Douglas Cat., controlled by self closing valve and regulating cock. Waste and vent as per ordinance.

SHOWERS.

All shower stalls to be provided and installed complete by plumber. Divisions, backs and ends of 7/8" slate slabs 6 feet above floor, raised 12" at partitions only. Front edge of slabs to enter slot of galvd. steel channel uprights, well fixed to floor and ceiling and cross stayed with 1 1/4" galvd. pipe, slabs to have galvd. connections. Floors to be cement dish-
ed by Mason to plumbers directions. Install trapped and vented brass out-
lets as approved below room floor level. Include Speakman's Institution shower complete to Figure 995 but with shower control on side of stalls. Connect all shower to Heater circulation system. Visible piping heavy neckal finish: Figure 995 includes adjustable head as Figure 990: or approved equal.

HOT WATER SERVICE.

Run galvd. overhead circulation system to supply showers and lavatories in Athletic Bldg. only. Install heater tank as before specified in approved location complete and connected to piping. Cover pipes in long runs with approved insulation.

HOSE BIBBS.

Branch in galvd. pipe and install brass key pattern hose bibbs to the following locations, additional to those previously given.

4	outlets distributed on front of Athletic Building.	One inch pipe.
2	" " " " rear " " "	" " "
2	" " " " East terrace.	" " "
3	" " " " West " " "	" " "
4	outlets branched off fixtures N.E. & N.W. public toilets.	1" pipe.

GENERAL. Provide air chambers to all water lines. Test the plumbing installation thoroughly at completion. Make good damaged or defective work, from any cause and leave everything in workmanlike and complete condition.

ELECTRICAL WORK.

GENERAL. This specification is intended to cover a complete installation of conduits, wiring and switchboards as herein specified.

This contractor must consult the general specifications for all clauses applying to the installation of his work in the entire construction of the building contemplated, to carry on his work at such times and in such a manner as may be necessary for the proper accomplishment of the same so as not to interfere with other mechanics engaged upon the work, and order his installation and erect the system in perfect harmony with all concerned. He must familiarize himself with the plans and specifications, examine the locality and note the conditions of the building and must complete the contract in the true intent and meaning of the same, which is and will be considered a first class and complete system in every respect, including all material and workmanship. Should any details required to render the installation complete be found missing from the plans and specifications same must be supplied as if distinctly specified without charge.

SERVICES OF EXPERT.

This contractor will furnish, in addition to all skilled and unskilled labor necessary for the execution of this work, a competent foreman who will be in general charge of the work of the contractor.

INSPECTION & ACCEPTANCE.

All material furnished under these specifications will be inspected by the architects and such tests made as are found necessary to determine that the condition and requirements are lived up to in every respect. All defective material and workmanship will be condemned and must be removed by or at the expense of the contractor and be replaced with new material or workmanship in order to fulfill the intent and meaning of this specification.

The contractor must protect his work at all times and be responsible for it until accepted by the architect.

Tests and acceptance will be made, if possible, within thirty (30) days from the completion of all work.

RULES & REGULATIONS.

All material used and work performed under this specification shall conform in every respect to the Rules and Regulations of the National Board of Fire Underwriters and the City Electrical Ordinance of the City of San Diego, California.

SYSTEM.

The system to be installed will be what is known as the three (3) wire system of feeders and sub-feeders and the two (2) wire system of branch circuits. All wires and cables will be run in iron conduit with all accessories.

All feeders and sub-feeders will be calculated for 220 volt service. All distributing circuits will be calculated for 110 volt service.

WIRING SYSTEM IN GENERAL.

The general system of wiring will consist of a complete system of iron conduit for feeders, sub-feeders and branch circuits. Standard black enamelled conduit will be used in this installation throughout, which will first be installed with all junctions, pull boxes, corners, outlets, couplings, elbows, etc., before any wires are drawn in.

The whole conduit system will be installed tight with leaded joints in the same manner as a gas system is installed. The conduits must have smooth interior, be free from burrs or sharp points with non-corrosive lining and be continuous from outlet to outlet.

All conduits shall be run concealed in the walls, partitions and floors of the building and all conduits must be built in when the walls and partitions are in the course of construction as no cutting will be allowed. The same will apply to all junctions, cutouts, switches and other boxes which may be placed before the walls, partitions and floors are erected and built in, or templates of the proper size furnished in place by the contractor, so as to leave proper space for the later insertion of the boxes which, however must then be securely fastened as if built in and to the satisfaction of the Architects.

Pull, junction, corner or outlet boxes must be provided in all long runs, whether of feeder or distributing circuits to facilitate the drawing in of the wires and the prevention of damage in the installation of wires in so doing.

All conduits, where more than four elbows are necessary must have pull boxes inserted and all bends and runs must be made with as large a radius as possible.

Conduits must be protected from mechanical injury by the contractor wherever it is liable to occur and only the heavy wall or standard gas pipe thickness of conduit will be used. Conduit of sufficient size is to be used throughout to permit the wires to be withdrawn and reinserted at any time without damage done to either the conduit or wires.

If required by the Architects or their Supt., any wires must be taken out and reinserted for inspection.

All boxes in this installation must be enamelled similar to that employed on the iron conduits. Outlet boxes must be placed so that the outer edge will not be exposed beyond the face of the finished plaster.

All ends of conduit must be cut square, reamed out smooth and connected butt to butt in couplings so as to form perfect continuity.

All terminals of conduits entering boxes of any description shall be furnished with locknut on the outside and bushing on the inside to lessen the danger of abrasion on the drawing in of the wires.

After installing the conduit system complete as a whole and after the plaster work is finished and the building thoroughly dry, the wires and cables will be drawn into the same.

WIRING. All wires and cables used in this building will be the best grade of "ROEBLING", "GENERAL ELECTRIC" or "OKONTITE" new code. All wires will be RC-DB as per rules of the National Board of Fire Underwriters. Samples of all wires will be submitted to the Architects for approval and left for comparison with wires to be installed, before the contract is signed. No smaller wire than No. 14 B & S gauge will be used and all wires of No. 8 B & S and larger must be stranded.

All distributing circuits over 100 feet long must be of #12 or larger.

All wires shall be sufficiently large so that the loss at full load shall not exceed two per-cent from service entrance to any light.

All cutouts, fuses, switches, connections, tablet-board, etc. to be made complete except where otherwise specified.

PANEL BOX. Panel box is to be installed at point shown on plans or as designated in specifications. The final location shall, in all cases, be designated by the architects and should any box be located without such authorization, the contractor shall move said box to point directed by architects at his own expense and make good all damage to plastering or furring.

Box to be made of No. (16) steel, coated or enamelled to prevent rusting and to be equipped with door made of same material. The size of box will be determined in each case by the size of corresponding panel.

Panel box is to be fitted with lugs for attaching panel board and linings and for keeping the back of the panel board one inch (1") from the back of the box. Panel box is to be securely fastened to the walls or frame of building by angle irons.

This contractor, before beginning work, shall submit for approval of Architects, drawings showing detailed construction of box he proposes to use.

PANEL BOARD. Panel board to be type A Crouse-Hinds make or equal, to have two extra panel switches and a fused main switch mounted at lower end of bus bars.

All branch switches must be of 15 amp. capacity and have fuse attachments for National Code fuses.

Each circuit shall be labelled in a neat workmanlike manner.

The panelboard and box linings shall be polished Hanson Slate or Marble as may be approved by the Architects. The Board shall be one inch (1") thick, the linings three-fourths of an inch.

The linings and steel box must be drilled and the holes properly spaced so that the outgoing wires will run from terminal connection at right angles to face the lining.

All conductors and switches are to be mounted on front of board. All screws and bolts whose heads shown on board must be copper plated brass.

All holes for bolts and screws for fastening parts onto board at back of board must be countersunk so that all heads of bolts or screws shall not be less than $\frac{1}{8}$ " below back surface of board. These holes are to be filled with non-corrosive insulating compound.

All exposed copper must be machine finished. Copper must be of the best quality of ninety eight per-cent of conductivity.

All copper parts must be of such size that the current density will not exceed eight hundred amperes per square inch cross sectional area, but must have an area of not less than .0625 square inches and shall preferably be one half ($\frac{1}{2}$ ") inch by one eighth ($\frac{1}{8}$ ") inch in cross section.

Stationary contacts must be of such size that the current density will not exceed 100 amperes per square inch.

This contractor must submit samples of bars and switches for the approval of the Architects before starting work. No material will be accepted that has not been so approved. He must also submit scale drawings of board which must show all copper sizes for approval before commencing work.

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PANEL BOARD. All wires and cables must be connected to bars and switches with cup terminals and lugs. Depth of cup and thickness of walls of cup must be ample and the wire must be soldered into same.

MAIN SWITCH &

METER LOOP. Furnish and install in transformer room (west storeroom) main switch of ample carrying capacity to take care of entire installation, as herein specified.

Meter loop will be located as shown on plans.

SERVICE

ENTRANCE. The service wires will enter building through west storeroom.

LOCATION	SCHEDULE OF OUTLETS AS SHOWN ON PLANS.			S.P. FLUSH SW.
	CEIL	BASE	CAPACITY EACH	
Entrance	I		60 Watt	I
Hall	I		60 Watt	I
West Corridor)				
" Entrance)	4		60Watt	panel sw.
East Corridor)				
" Entrance)	5		60 watt	" "
Mens locker Rm-2	2		100 "	2
Boys " "	I		100 "	I
Ladies " "	I		100 "	I
" " "		I	150 "	
Mens showers-2	2		150 "	2
Boys " "	I		60 "	I
" " "		I	150 "	
Ladies " "	I		150 "	I
" " "	I		150 "	
Mens lobby	I		60 "	I
Boys " "	I		60 "	I
Ladies Lobby	I		60 "	I
Mens towel Rm.)				
" lobby)	2		60 "	I
Mens toilet	I		60 "	I
Mens " "		I	150 "	
Boys " "	I		60 "	I
Ladies " "	I		60 "	I
Office	I		60 "	I
" " "		I	150 "	
Committee Rm	I		100 "	I
2 Hall closets	2		60 "	2
2 store rooms	2		60 "	2

FIXTURES.

Allowance for fixtures for the above fifty dollars (\$50.00)

Subject to written order of the Park Commissioners or alternative deduction from contract